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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,581	08/31/2001	Takashi Moriuchi	010923	9413

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EXAMINER

WALLING, MEAGAN S

ART UNIT	PAPER NUMBER
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2863

DATE MAILED: 08/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/942,581

Applicant(s)

MORIUCHI, TAKASHI

Examiner

Meagan S Walling

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 31 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Hardesty et al. (United States Patent Number 6,138,056).

Claim 1 teaches a machine tool maintenance system comprising a sensor for detecting the static and/or dynamic characteristics of the machine tool, a reference value storage section, a judgment section, and an output device. Hardesty et al. (column 6, lines 26-53) describes a process by which a computer measures and analyzes machine operation. First the time for traveling a certain distance is recorded (the static/dynamic characteristic is detected) and stored in a file along with the distance traveled. Stored in the program is appropriate information pertaining to different aspects of the machine operation, such as the time required to travel a certain distance (the reference value storage section). If the time to travel the distance is greater than the time stored in the reference value storage section, then maintenance is required (the judgment section of the device). If maintenance work is required, there will be an indication on a display (the output device).

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Claim 2 teaches a maintenance tool system including one of the following: a rotation sensor, a temperature sensor, an acceleration sensor, a displacement sensor, or a noise meter. Hardesty et al. (column 6, lines 26-53) describes a process by which a computer measures and analyzes machine operation. First the time for traveling a certain distance is recorded (the static/dynamic characteristic is detected) and stored in a file along with the distance traveled. Since the distance traveled is recorded, the machine was equipped with a displacement sensor.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hardesty et al. in view of Love et al. (United States Patent Number 5,629,871).

Hardesty et al. (column 6, lines 26-53) describes a process by which a computer measures and analyzes machine operation, but does not describe storing the results of the judgment section to estimate future characteristics. Love et al. describes a technique for measuring the wear on components of a dialysis machine. Applicant's claim 3 teaches storing the results obtained from the judgment section in a "judgement result storage section." Love et al. (column 7, lines 34-46) teaches the comparison of a test value to a threshold value to determine the occurrence of abnormal events (judgment section) and the storage of these abnormal events along with the time and the date (judgment result storage section). Claim 4 teaches an estimate section for estimating future characteristics by using the results stored in the judgment result storage section.

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Love et al. (column 7, lines 44-46) teaches using the time and date of abnormal events for prediction purposes. Love et al. further describes (column 15, lines 1-3) projecting trend information describing abnormal events for the components by use of temporal information. Therefore, as taught by Love, it would have been obvious to anyone skilled in the art to create a judgment result storage section to store the information obtained from the judgment section and to further use this information to predict future events. It would be more time and cost efficient to predict future characteristics and trends of the machine tool than to have errors occur or parts break down. A way to predict future events is by observing a trend from past events. Therefore, it would have been obvious to predict the future characteristics by keeping track of past events in a storage section and using this information to estimate future events.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hardesty in view of Love et al. and Saito (United States Patent Number 4,644,426) and Ruh (United States Patent Number 4,458,893).

Hardesty et al. (column 6, lines 26-53) describes a process by which a computer measures and analyzes machine operation, and Love et al. (column 7, lines 44-46) teaches using the time and date of abnormal events for prediction purpose, but they do not teach the operation of the spindle or feeder units by a drive signal operator. Applicant's claim 5 teaches the use of a drive control signal to operate the main spindle unit and/or feeder. Saito teaches a floppy disk drive apparatus that (in the abstract) has "a motor which is driven in response to a drive signal from a drive signal generator, thereby rotating the spindle." Ruh teaches (column 7, lines 3-5) the use of an electric drive control signal for driving the rotary sheet feeder. In view of Saito and Ruh, it would have been obvious to anyone skilled in the art to use a drive signal generator to generate a

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drive control signal to operate the main spindle unit and/or the feeder. Since drive signal generators are commonly used to generate drive control signals to operate spindles in hard drives and feeders in printers or printing presses, it would make sense to use the drive signal generator to operate the machine tool that contains both a spindle and a feeder.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Meagan S Walling whose telephone number is (703) 308-3084. The examiner can normally be reached on Monday through Friday 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hilten can be reached on (703) 308-0719. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-5841 for regular communications and (703) 308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

msw
July 25, 2002



JOHN S. HILTEN
SUPERVISORY PATENT EXAMINER
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